

CERTAMEN MELASTOMATACEIS XXXVII

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As a result of continuing and predominantly Scandinavian field work, 48 taxa of Melastomataceae (16 newly described) have been added to those originally listed in the Flora of Ecuador No. 13 (1980). Apart from the three novelties being described below or noted elsewhere (mostly in Phytologia 52: 61-69. 1982) since 1980, the following have been recently collected (the number-letter prefix indicating the placement in the Flora of Ecuador treatment) and are deposited at AAU or GB (a few at NY), with duplicates of most at US: 1b. Adelobotrys klugii Wurdack (Napó: Parque Nacional Yasuni, 260-350 m, Ollgaard et al 38870. Morona-Santiago: Taisha, 250-300 m, Brandbyge & Asanza 32154); 1a. Salpingia secunda DC. (Napó: Río Cuyabeno, 300 m, Brandbyge 33711. Pastaza: Curaray, 250 m, Holm-Nielsen et al 22144); 3a. Triolena amazonica (Pilger) Wurdack (Napó: Nuevo Rocafuerte, 200-230 m, Jaramillo & Coello 4637; San Pablo de los Secoyas, 235 m, Holm-Nielsen 21033, Brandbyge et al 32450; Coca-Iago Agrio, 200 m, Brandbyge et al 30242. Pastaza: Lorocachi, 200 m, Jaramillo et al 30791, 30980, 31253); 43a. Miconia radulaefolia (Benth.) Naud. (Napó: Lagunas de Cuyabeno, 300 m, Brandbyge et al 36031, 36123); 46a. Miconia poeppigii Triana (Pastaza: near Sarayacu, H. Lugo 5412, 5473, 5606); 49a. Miconia prasina (Sw.) DC. (Napó: Añangu, 260-350 m, Ollgaard et al 38871); 59b. Miconia abbreviata Markgraf (Napó: Río Cuyabeno, 230 m, Holm-Nielsen et al 21259; Río Payamino, 250 m, Jaramillo & Coello 4159); 63a. Miconia cannabina Markgraf (Napó: Río Cuyabeno, 250 m, Brandbyge et al 30523); 66a. Miconia pterocaulon Triana (Pastaza: Lorocachi, 200 m, Jaramillo et al 31302); 72a. Miconia minutiflora (Bonpl.) DC. (Pastaza: Montalvo, 300 m, Ollgaard et al 35429, 35494); 76a. Miconia dolichorrhyncha Naud. (Napó: Río Coca, 250 m, Brandbyge & Asanza 30333; Río Cuyabeno, 220 m, Holm-Nielsen et al 21202); 155a. Miconia nodosa Cogn. (Carchi: Julio Andrade-El Carmelo, 3200 m, Luteyn et al 8419); 164a. Miconia chlorocarpa Cogn. (Napó: Sucumbios, 3600-3800 m, Jaramillo & Coello 3909); 4a. Tococa stenoptera Gleason (Napó: Lagunas de Cuyabeno, 300 m, Brandbyge et al 36067); 4b. Tococa coronata Benth. (Napó: Río Cuyabeno, 220-300 m, Holm-Nielsen et al 21196, 21303, 21397, 21445, Brandbyge 33570, 36163); 1a. Clidemia bullosa DC. (Napó: Río Cuyabeno, 300 m, Brandbyge et al 33560); 6a. Clidemia juruensis (Pilger) Gleason (Pastaza: Río Bobonaza, 300 m, Ollgaard et al 34707); 7a. Clidemia heterophylla (Desr.) Gleason (Napó: Coca, 200 m, Harling et al 19859; San Pablo de Secoyas, 300 m, Brandbyge et al 33358; Añangu, 200 m, Ollgaard et al 38946, 38958, 39026); 16a. Clidemia japurensis DC. var. heterobasis (DC.) Wurdack (Pastaza: Río

Ishpingo, 285 m, Ollgaard et al 35031); 25a. Clidemia gracili-flora Huber (Pastaza: Río Bobonaza, 300 m, Ollgaard et al 34709); 1a. Henriettea cf. stellaris Berg ex Triana (Napo: Lagunas de Cuyabeno, 250 m, Brandbyge et al 30518, 33857, 33987; Río Cuyabeno, 300 m, Brandbyge et al 33623); 5a. Henriettella loretensis Gleason (Napo: Lagunas de Cuyabeno, 300 m, Brandbyge 33935); 3b. Leandra boissieriana Cogn. (Napo: Río Cuyabeno, 300 m, Brandbyge et al 33704); 3c. Leandra candelabrum (Macbride) Wurdack (Napo: Puerto Montufar, Río Cuyabeno, 230 m, Holm-Nielsen et al 21252. Pastaza: Lorocachi, 200 m, Brandbyge & Asanza 30803); 1b. Ossaea bullifera (Pilger) Gleason (Pastaza: Río Bobonaza, 300 m, Ollgaard et al 34510); 7a. Ossaea rufibarbis Triana (Esmeraldas: San Jose, Boom 1290).

MERIANIA FINICOLA Wurdack, sp. nov.

In systemate Cogniauxii M. tomentosae (Cogn.) Wurdack et M. pichinchensi Wurdack affinis, floribus minoribus petalis albis differt.

Ramuli primum sulcato-quadrangulati demum teretes sicut folia novella inflorescentiaque pilis dense asperis 0.1-0.2 (-0.3) mm longis in foliorum superficie ubique caducis dense setulosi; linea interpetiolaris tenuis evoluta. Petioli (1.5-)2-3 (-3.5) cm longi; lamina 14-22 X 8-14 cm ovato-elliptica apice subabrupte ca 1 cm hebeti-acuminato basi rotundata et paullulo (2-4 mm) emarginata, subcoriacea et distanter (2-4 mm) callosa-serrulata, supra obscure bullata, 7-nervata (pari 2-4 mm inframarginali incluso) nervis secundariis plerumque 3-5 mm inter se distantibus subtus sicut nervulis paulo elevatis nervulis subtus laxe (ca 2 mm) areolatis. Panicula ca 15-18 cm longa; flores 5-meri in ramis primariis ca 8-10 umbelliforme terminales bracteis ca 15 X 12 mm caducis involucreti. Hypanthium (ad torum) 4.5-5 mm longum dense strigulosum pilis 0.2-0.3 (-0.5) mm longis asperis ad basim expansis; calyx in alabastris maturis 5-5.5 mm longus (rostro hebeti ca 1-2 mm longo incluso) densiuscule minuteque strigulosus ad anthesim supra torum irregulariter deciduus. Petala glabra 10-11 X 7-10 mm late obovata apice rotundato-truncato. Stamina anisomorphica glabra, antherarum thecis subulatis poro 0.15-0.2 mm diam. dorsaliter inclinato. Stamina maiora: filamenta 5-5.5 mm longa; antherarum thecae 6-7.2 X 0.8-1 X 1.5-2 mm; connectivum non vel paullulo (0.1 mm) prolongatum, appendice basali ca 1.5-2 mm longa hebeti vel paullulo emarginata tuberculo dorsali ca 0.2 X 0.2 mm. Stamina minora: filamenta 6-7 mm longa; antherarum thecae 4.4-5.3 X 0.7-1 X 1.4-1.5 mm; connectivum 0.4-0.6 mm prolongatum, appendice basali 0.9-1 mm longa hebeti tuberculo dorsali 0.25 mm longo hebeti. Stigma non expansum; stylus 10-12.6 X 1.2-0.4 mm glaber; ovarium 5-loculare glabrum apice hebeti 0.3-0.7 mm 5-lobulato.

Type Collection: H. Balslev, J. L. Luteyn, & B. Boom 2575 (holotype US 2992524; isotypes AAU, QCA), collected in disturbed montane forest at Km 2 of Santa Barbara-La Bonita road, 0°40' N, 7°35' W, Prov. Napo, Ecuador, elev. 2750 m, 17 May 1982. "Arbol delgado de 6 metros. Flores blancas."

Paratype: D. D. Soejarto 1069 (ECON, US), from Cerro Portachuelo, Buenos Aires Point, Com. Putumayo, Colombia, elev. 2800 m, 25 July 1964. "Shrub 3-4 m tall. Sepals green, petals white."

Both suggested relatives have calyces 10-15 mm long, orange-red petals 15-23 mm long, filaments 11-15 mm long and anther thecae 8-10 mm long; the connective appendages and ovaries in all three species are qualitatively similar. The species-pair Cen-tronia phlomoides Triana-C. grandiflora Standley certainly should be transferred by a monographer to Meriania and are closely related to M. finicola, differing in the greater vegetative pubescence development (setulose lower leaf surfaces) and larger flowers (petals 16-20 mm long, but white) with longer hypanthial hairs. The description of M. finicola is based upon the type, the Colombian paratype differing in minor vegetative features (petioles up to 10 cm long, blades obscurely plinerved 0.4-1 cm).

MERIANThERA SIPOLISII (Glaz. & Cogn.) Wurdack, comb. nov.

Meriania sipolisii Glaz. & Cogn., DC. Mon. Phan. 7: 1182. 1891.

MERIANThERA BURLEMARXII Wurdack, sp. nov.

M. sipolisii (Glaz. & Cogn.) Wurdack affinis, foliis ad apicem hebeti-acutis subtus in superficie demum esetulosis, floribus solitariis differt.

Rami tumidi teretes primum furfuracei mox glabrati. Folia terminaliter conferta; petioli ca 0.7-1.5 cm longi; lamina (paulo immatura) 7-11 X 5-6.5 cm late ovato-elliptica apice hebeti-acuto basi late obtusa vel rotundata, chartacea et integra, ubique primum modice arachnoideo-puberula in superficie supra mox et subtus demum glabrata subtus in venis primariis persistenter puberula (0.1-0.3 mm) in superficie modice resinoso-glandulosa, 5-nervata nervis secundariis 3-5 mm inter se distantibus venularum areolis ca 0.5 mm latis. Flores ad ramorum apices solitarii; pedicelli 2.5-3 cm longi et 1-2-articulati, bracteolis 2-3 X 0.2-0.4 mm caducis. Hypanthium (ad torum) ca 6 mm longum sicut calyx extus densissime arachnoideo-furfuraceum; calyx ca 5 mm longus (in alabastris clausus?), lobis interioribus ca 3 mm longus ovatis, dentibus exterioribus crassis ca 1 mm eminentibus. Petala ca 30-35 X 23-27 mm late obovata (apice rotundato) extus in alabastris sparse furfuracea mox glabrata. Stamina dimorphica; filamenta basin versus sparsissime glanduloso-puberula, thecis oblongo-subulatis. Stamina maiora: filamenta 10 mm longa; thecae 7-8.1 X 1 X 1.8 mm, poro dorsaliter inclinato; connectivum 0.9-1 mm prolongatum dorsaliter dente basali hebeti 0.5 mm longo descendenti et appendice ascendenti 5-5.3 X 0.35 mm (apice expanso ca 1.2 mm lato) armatum. Stamina minora: filamenta 14-15 mm longa; thecae 4.5-5 mm longae, poro ventraliter inclinato; connectivum 0.2-0.3 mm prolongatum dorsaliter dente hebeti 0.5 X 0.2 mm descendenti et appendice ascendenti 3 X 0.3 mm (apice expanso emarginato 0.6 mm lato) armatum. Stigma non expansum; stylus 17 X 0.7-0.3 mm basin versus sparse glanduloso-puberulus (0.1-0.3 mm); ovarium

5-loculare et omnino inferum, cono apicali costulato 1 mm alto sparse glanduloso-puberulo.

Type Collection: P. C. Hutchison 8472 (holotype RB; isotype US), collected in garden of Roberto Burle Marx, Rio de Janeiro, Brazil, 24 Sep. 1983. "Stem rather fleshy, easily cut, compartmentalized in longitudinal section, to 75 cm tall, rooting where touching ground. Leaves deciduous in winter, the flowers appearing with the young leaves and lasting 2-3 days. New leaves brown-lanate, glabrous above at maturity, brown-lanate on veins below. Petals magenta."

Paratype: F. P. Darke D-98 (US), cultivated at Longwood Gardens, Acc. No. 770066 from Roberto Burle Marx, 13 April 1978. "Herb to 12 cm; stem fleshy, grayish brown; leaves medium green, all congested terminally; petals stiff, purple (RHS Fan 2, 72/B)."

Merianthera sipolisii has leaf blades rounded to retuse at the apex and permanently and densely arachnoid-pubescent beneath, well developed panicles, petals externally densely furfuraceous, and small stamens with the descending connective tubercle 1.6-1.7 mm long. The generotype, M. pulchra Kuhlmann, has esetulose leaf blades rounded at the apex, developed panicles, hyaline calyx with external calyx teeth undeveloped, nearly glabrous petals only 14.5-16 X 14-15 mm, and glabrous filaments and style; the anther morphology is like that in M. burlemarxii. In all three species, the 5-celled ovary is completely inferior and with a sparsely to moderately glandular apical column 1-1.4 mm high; the anther pore is dorsally inclined in the large anthers, ventrally in the small ones. Burle Marx's plants were introduced into his garden from Vila Panca, Rio Doce, Mun. Colatina, Espirito Santo.

ADELOBOTRYS ANTIOQUIENSIS Wurdack, sp. nov.

A. panamensi Almeda affinis, foliis breviter petiolatis laminis ad basim panduriformibus cordulatis fructibus maioribus differt.

Ramuli primum compressi demum teretes sicut folia inflorescentiaque primum glandulis ca 0.05 mm longis caducis sparse induti (in foliis novellis pilis malpighiis caducis sparsissime evolutis) alioqui glabri. Petioli 0.5-1 (-1.5) cm longi crassi; lamina (16-)20-32 X (7-)10-16 cm oblongo-panduriformis apice abrupte vel subabrupte per 0.5-1 cm hebeti-acuminato basi 3-5 mm cordulata, subcoriacea et integra, 2-4 cm 5-plinervata nervis secundariis ca 5-8 mm inter se distantibus nervulis subtus laxe reticulatis areolis (2-)3-5 mm latis. Inflorescentia multiflora (floribus 12-32) primum terminalis demum lateralis subumbelliformis axe 0.5-1 cm longo plerumque breviter trifurcata, pedicellis ad anthesim ca 15 mm longis (in fructu usque ad 25 mm). Hypanthium (ad torum) 4 mm longum; calyx ca 2.5 mm longus limbo expanso integro. Petala glabra 13.5-14 X 6-6.2 obovato-oblonga apice rotundato-truncato. Stamina paulo dimorphica glabra, thecis subulatis poro 0.2-0.25 mm diam. dorsaliter inclinato, connectivis non prolongatis, connectivi appendice ascendenti subtereti ad apicem hebeti-rotundato et dente basali acutissimo.

Stamina maiora: filamenta 9.5 mm longa; thecae 8 X 0.7 mm; connectivi dens basalis 0.5 mm longus, appendice ascendenti 2.2 X 0.3 mm. Stamina minora: filamenta 10 mm longa; thecae 4.8-5 X 0.7 mm; connectivi dens basalis 0.4-0.5 mm longus, appendice ascendenti 1.8-2 X 0.3 mm. Stigma punctiforme; stylus 9 X 0.6-0.15 mm glaber; ovarium 5-loculare apice truncato et sparsissime glandulis 0.05 mm longis induto; semina numerosa ca 0.5 X 0.35-0.4 mm cuneata sublaevia.

Type Collection: Juan José Hernández, Saulo Enrique Hoyos, & Jorge Rpo. 162 (holotype HUA 15580; isotypes HUA, US), from near El Palacio along the Medellín-Bogotá highway, Sector Río Samaná-Río Claro, San Luis, Antioquia, Colombia, elev. 550 m, 5 Dec. 1981. "Arbusto de 3 mts. Flor de cáliz blanco y corola lila, estambres de anteras amarillas. Común y creciendo en bosque de transición."

Paratypes (HUA, US, both near-topotypical, fruiting): Albert & Brand 267, from between El Palacio and Josefina, elev. 670 m ("Arbusto de 2 m"); Hernández, Hoyos, & Rpo. 153, from near El Palacio, elev. 550 m ("Arbusto de 4 m").

The Panamanian relative has leaves with petioles mostly 2-4 cm long and blades with acute bases, as well as fruiting hypanthium plus calyx 6-7 mm (rather than 9-10 mm) long; a recent (fruiting) collection is Correa et al 3061 (near Copé, Coclé), the capsules (3-4-)5-locular.

ADELOBOTRYS HOYOSII Wurdack, sp. nov.

A. antioquiensis Wurdack affinis, inflorescentiis bene evolutis ovarii apice 5-lobulato differt.

Ramuli novelli subancipites sicut folia hypanthiaque glandulis minutis caducis sparse obsiti alioqui glabri. Petioli liberi 0.3-0.5 cm longi; lamina (22-)28-52 X (10-)14-23 cm elliptica apice subabrupte per 0.5-1.5 cm hebeti-acuminato basi anguste attenuata et cordulato-rotundata, subcoriacea et integra, 5-plinervata pari interiore 3-6 cm et pari exteriore 2.5-4.5 cm supra basim divergenti nervis secundariis 5-10(-15) mm inter se distantibus nervulis subtus laxe reticulatis areolis plerumque 3-5 mm latis. Panicula ca 9-18 cm longa multiflora terminalis; pedicelli 10-13 mm (in fructu usque ad 25 mm) longi. Hypanthium (ad torum) 4 mm longum; calyx ca 3.8 mm longus, limbo expanso integro. Petala glabra 16.7-17.2 X 9 mm obovato-oblonga apice rotundato. Stamina paulo dimorphica glabra, thecis subulatis poro 0.25 mm diam. dorsaliter inclinato, connectivis non prolongatis, appendice ascendenti subtereti ad apicem hebeti-rotundata, dente basali acuto infra apicem obscure auriculato. Stamina maiora: filamenta 8.7-9 mm longa; thecae 7.4-7.6 X 1 mm; connectivi dens basalis 0.5 mm longus, appendice ascendenti 3 X 0.7 mm. Stamina minora: filamenta 12.7-12.9 mm longa; thecae 5.6-5.9 X 0.9 mm; connectivi dens basalis 0.7 mm longus, appendice ascendenti 3 X 0.9 mm. Stigma punctiforme; stylus 10 X 1-0.25 mm glaber in ovarii collo 1 mm immersus; ovarium 5-loculare apice 5-lobulato et sparsissime glandulis 0.05 mm longis induto; hypanthium fructiferum calycem includens ca 6 mm longum; semina

numerosa ca 0.5 X 0.3 mm cuneata sublaevia.

Type Collection: Juan José Hernández & Saulo Enrique Hoyos 588 (holotype HUA 018100; isotype US), collected along the Medellín-Bogotá highway (Sector Río Samaná-Río Claro) east of Josefina, San Luis, Depto. Antioquia, Colombia, elev. 740 m, 13 Dec. 1982. "Arbolito de 7 m. Flores de cáliz blanco, corola morada. Abundante y creciendo en bosque primario perturbado."

Paratypes (all from along the Medellín-Bogotá highway between Río Samaná and Río Claro, San Luis, Antioquia, Colombia): L. Albert, M. Escobar, & M. Giron 140 (HUA, US), topotypical, elev. 700 m ("Arbusto de 4 m. Frutos cápsulas blancas, cuando maduran se tornan café"); Hernández & Hoyos 493 (HUA), topotypical, elev. 780 m ("Arbusto de 5 mts. Frutos secos"); Hernández & Hoyos 402 (HUA), near Altavista, elev. 720 m ("Arbusto de 2 m. Fruto seco café"); Hernández & Hoyos 414 (HUA), near Altavista, elev. 600 m, 24 June 1982 ("Arbolito de 5 m. Flores de caliz blanco, petalos lila, anteras amarillas y lila"); Hernández, Hoyos, Borja, & J. Rpo. 659 (HUA), Río Claro, elev. 350 m, 14 Jan. 1983 ("Arbusto debil de 2 m. Flores lila. Frutos blancos").

Both A. antioquiensis and A. panamensis Almeda have much contracted inflorescences, as well as truncate ovary apices.

MICROLICIA COMPARILIS Wurdack, sp. nov.

M. cinereae Cogn., M. subaequali Wurdack, et M. petasensi Wurdack affinis, floribus minoribus differt.

Ramuli primum quadrangulares demum teretes sicut folia sepala (extus) hypanthiaque densiuscule setulosi pilis gracillimis 0.3-0.4 mm longis eglandulosis. Folia conferta appressa essentialiter sessilia petiolis ca 0.1 mm longis; lamina 2.4-2.7 X 0.7-1 mm lanceata vel oblongo-lanceata apice acuto basi rotundata vel paullulo (0.1 mm) auriculata, rigidiuscula et integra, subtus modice impresso-punctata, uninervata. Flores ad ramulorum apices solitarii-terni 5-meri, pedicellis obscuris ca 0.2 mm longis. Hypanthium (ad torum) 2.3 mm longum teres; calycis tubus 0.2 mm longus, lobis 1.8 X 0.9 mm lanceatis ad basim paulo remotis intus sparse strigulosis. Petala 4.6-5 X 2.7-3 mm obovata apice late acuto et setula 0.2-0.3 mm longa eglandulosa terminato alioqui glabra. Stamina isomorphica glabra; filamenta 2-2.1 mm longa; thecae 1.6-1.7 X 0.4 X 0.6 mm (rostro 0.2 mm longo incluso) oblongae poro 0.1 mm diam.; connectivum 0.7-0.8 mm prolongatum appendice ventrali 0.2-0.25 mm longa apice hebeti emarginato. Stigma 0.15 mm diam.; stylus 5.8 X 0.2-0.25 mm glaber; ovarium 3-loculare glabrum apice ca 0.3 mm emarginato.

Type Collection: L. A. Mattos Silva, Elton M. C. Leme et al 1636 (holotype CEPEC 30937; isotype US), collected among rocks at Km 12, Palmeiras-Mucugê road, Município Palmeiras, Bahia, Brazil, 13 Jan. 1983. "Arbusto bastante ramificado, aprox. 50 cm de altura. Flores roxas com estames amarelos."

Microlicia cinerea has larger leaves and flowers, with the connective prolongation in the large stamens much longer and the ventral appendage well-developed; in pubescence, M. comparilis

and M. cinerea are similar. Microlicia subaequalis has larger and less densely pubescent leaves, much longer (3-3.2 mm) calyx lobes, corolla 7.5-8 X 4.2-4.8 mm, and anther thecae 2.4-2.6 mm long; M. petasensis has sparser vegetative pubescence, petals 7.9-8.3 X 4-4.3 mm, and larger dimorphic stamens (connective in the large series prolonged 5-6 mm and with ventral appendage 0.6-1 mm long). More distant relatives perhaps are M. consimilis Wurdack (3-nerved leaves 5-9 mm long, calyx lobes 2.5 mm long) and M. minima Markgraf (esetulose leaves and hypanthia, smaller leaf blades, and somewhat longer anther thecae). Microlicia minima var. aristifera has now been recollected (Hatschbach 46522, airport, Mun. Rio de Contas, Bahia, 17 May 1983).

TIBOUCHINA MARUMBIENSIS Wurdack, sp. nov.

T. hatschbachii Wurdack affinis, foliorum petiolis longioribus laminarum venis primariis lateralibus ad basim conjunctis staminum maiorum connectivis vix prolongatis stylo glabro differt.

Ramuli primum obscure quadrangulati mox teretes dense pilis laevibus laxe appressis usque ad 1 mm longis strigulosi. Petioli plerumque 1-1.5 cm longi; lamina (3-)4-8 X (1.5-)2.5-4.3 cm ovato-elliptica apice late acuto basi obtusa, rigidiuscula et integra densiuscule appresso-ciliolata, supra pilis laevibus (0.2-)0.5-1 mm longis incurvo-appressis ad basim paulo expansis sparsiuscule induta, subtus pilis gracilibus ca 1 mm longis modice setulosa, 5-nervata nervis primariis lateralibus ad basim 0.3-0.6 cm coalitis nervis secundariis ca 2-3 mm inter se distantibus. Flores solitarii terminales 5-meri bracteis 4-6 involucreti; bractee 8-10 X 12-15 mm oblatae liberae extus sicut hypanthium calycis lobique densissime sericeo-strigosae (pilis plerumque 1.5-2 mm longis) intus glabrae. Hypanthium (ad torum) ca 8 mm longum; calycis lobi 7-10 X 6-7 mm asymmetrico-ovato-oblongi (apice rotundato) dense ciliolati (ciliis 0.5-1 mm longis). Petala 35-47 X 32-37 mm asymmetrico-ovata apicem versus ciliolata pilis 0.3-0.5(-1) mm longis p. p. glanduliferis. Stamina dimorphica, filamentis basim versus sparsiuscule vel modice glanduloso-setulosis (pilis 0.3-1.2 mm longis), thecis subulatis ca 1-1.2 mm latis, poro ca 0.6 mm diam. ventraliter inclinato. Stamina maiora: filamenta (15-)19-21 mm longa; thecae (12-)14-17 mm longae; connectivum 5-7 mm prolongatum, lobis ventralibus minutis ca 0.2-0.3 X 0.2-0.3 mm. Stamina minora: filamenta (10-)12-13 mm longa; thecae 12-13 mm longae; connectivum 0.5-1.3 mm prolongatum, lobis ventralibus (0.3-)0.5 X (0.3-)0.4 mm hebetibus. Stylus 24-25 X 1-0.6 mm glaber.

Type Collection: G. Hatschbach 23934 (holotype MBM 13221; isotype US), collected in cloud forest on Serra Marumbi, Mun. Morretes, Paraná, Brazil, elev. 1300-1400 m, 27 Feb. 1970. "Arbusto 1 m 50, flor purpurea."

Paratypes (both topotypical): Hatschbach 23912 (MBM, US), elev. 1300 m ("Arbusto 2 m, flor violeta"); Hatschbach 44585 (MBM, US) ("Arbusto 2 m, flor violeta").

In T. hatschbachii, the cauline hairs are patent, the petioles only 0.2-0.6 cm long, the primary leaf veins free to the

base, the inflated ventral lobes in the large stamen connectives ca 0.6 X 0.6 mm, and the style is basally setulose. Also related are T. boraceiensis Brade (cauline hairs patent, leaf blades 7-nerved with denser finer pubescence above, floral bracts only two, flowers smaller with large stamen connectives ventrally with inflated appendages ca 0.6 X 0.5 mm) and T. campos-portoi Brade (leaf blades beneath much less pubescent with appressed hairs and primary veins free to the base, bracts and calyx lobes acute, ventral lobes of large stamen connective appendage ca 1 mm long). In Cogniaux' monograph, species 14-16 (all with acute calyx lobes and long ventral appendage in the stamen connective) seem more distantly related, as do T. dusenii Cogn. (also from Marumbi) and T. catharinensis Brade.

MICONIA COMPTIFOLIA Wurdack, sp. nov.

M. oldemanii Wurdack affinis, ramulorum nodis non callosis foliorum laminis minus plinervatis filamentis glanduloso-puberulis differt.

Ramuli acute quadrangulati sicut petioli inflorescentiaque primum modice granuloso-furfuracei (granulis 0.05-0.1 mm latis rufidulis) demum glabrati. Petioli (1.5-)2-6(-14) cm longi ca 0.5-1 mm alati; lamina 18-35(-45) X 9-17(-31) cm elliptica apice per 0.5-1.5 cm subabrupte acuminato basi late acuta vel obtusa, chartacea et distanter undulato- vel subcrenulato-serrulata, supra glabra, subtus in venis primariis secundariisque sparsiuscule vel sparse caduceque granuloso-furfuracea alioqui glabra, breviter (0.5-1.5 cm) 5-plinervata vel pseudoplinervata nervis secundariis ca 1-1.5 cm inter se distantibus nervulis subtus laxe reticulatis (areolis 1-1.5 mm latis). Inflorescentia 12-20 cm longa anguste oblonga ramis primariis 0.3-0.8 cm longis paucifloris; flores 5-meri ut videtur sessiles (pedicellis crassis ca 0.5-1 mm longis), bracteolis 0.3 mm longis subulatis subpersistentibus. Hypanthium (ad torum) 4.1-4.2 mm longum basim versus sparse granuloso-furfuraceum; calyx 0.8 mm altus integer, dentibus exterioribus minutis ca 0.1 mm eminentibus; torus intus sparse glandulosus (0.1 mm). Petala pruinoso-furfuracea ca 5 X 2.8-3 mm oblongo-obovata apice rotundato paulo emarginato. Stamina paulo dimorphica, filamentis 5.7 mm vel 4 mm longis sparse glanduloso-puberulis (0.1 mm), thecis subulatis, poro 0.1 mm diam., connectivo non prolongato ventraliter ad basim glandulis stipitatis paucis (2-6) ornatis. Stamina maiora: thecae 6-6.2 X 0.5-0.6 X 0.7-0.8 mm, poro ventraliter inclinato. Stamina minora: thecae 5-5.1 X 0.5-0.6 X 0.7 mm, poro dorsaliter inclinato. Stigma truncatum vel paullulo expansum 0.4 mm diam.; stylus 12.5 X 0.3-0.4 mm glaber in ovari apicem ca 0.3-0.4 mm immersus; ovarium 3-loculare ca 1/5-1/4 inferum apicem versus sparse glanduloso-puberulum (0.1 mm).

Type Collection: R. Boyan 291 (INPA Herb. No. 21108) (holotype INPA), collected south of "San Antonio (?)", Amazonas, Brazil, 4 Mar. 1968. "Small tree in open places. Leaves smooth and fleshy. Flowers pink."

Paratypes (all Manaus-Caracarai Road, Amazonas, Brazil):

Prance, Philcox, Rodrigues, Ramos, & Farias 4986 (INPA, NY, US), Rio Urubu between Cachoeira Iracema and Natal, 5 June 1968 ("Shrub 5 m tall, in forest on terra firme. Inflorescence and young fruit pink"); Prance & Coêlho 17577 (INPA, NY, US), Reserva Experimental do INPA, Km 60, 27 Sep. 1973 ("Treelet 4 m in forest on terra firme. Buds brown"); Susanne Renner 239 (INPA, US), north of Km 90, World Wildlife Fund reserves along ZF3 road, 11 Dec. 1981 ("Tree 3-6 m tall, frequent in primary forest. Young fruit light red"); Loureiro, Mello, & de Miranda INPA 48.199 (INPA), Km 123, 20 Apr. 1974 ("Arbusto de 2 metros; flores crème; terra firme; solo argiloso"); Loureiro, Lima, & Faustino INPA 48.146 (INPA), Km 124, 26 Mar. 1974 ("Arbusto de 3 metros; frutos verdes; terreno firme arenoso"); Loureiro, Pires, de Miranda, Lima, & Albuquerque INPA 48.073 (INPA), Km 125, 22 Mar. 1974 ("Arbusto de 4 metros; flores cremes; terra firme"); Loureiro, Lima, & Faustino INPA 47934 (INPA, US), Km 128, 14 Feb. 1974 ("Arvoreta de 5 m; flores brancas; frutos vermelhos").

Miconia oldemanii has branchlet nodes with annuli around the petiole bases, leaf blades long-decurrent at the base with free petioles only 0.3-1 cm long and the inner pair of primary veins diverging 2-6 cm above the blade base, and filaments glabrous; in other floral details, including the calyx persistent in fruit, the two species are alike. My original remarks concerning the affinities of M. oldemanii may not be germane; the relationship may well be closer with M. furfuracea (Vahl) Griseb., M. simplex Triana, and M. sanctiphilippi Naud. The general facies of M. comptifolia is rather like that of M. eriodonta DC., but not the pubescence or flowers.

MICONIA HYLOPHILA Wurdack, sp. nov.

M. pubipetalae Miquel affinis, floribus 6-meris brevissime pedicellatis ovario 4-loculari differt.

Ramuli primum obscure rotundato-quadrangulati mox teretes sicut foliorum venae primariae et secundariae inflorescentiaque densissime pilis pinoideis 0.1-0.15 mm longis induti. Petioli (1.5-)2-3(-3.5) cm longi; lamina (8-)12-20(-24) X (3.5-)6-9(-11) cm elliptica vel oblongo-elliptica apice subabrupte 1-2 cm caudato-acuminato basi late acuta, subcoriacea et integra, supra glabra, subtus in venulis superficieque densissime pilis rufidulis stellulato-pinoideis 0.05-0.1 mm longis obsita, trinervata (pari tenui inframarginali excluso) nervis secundariis ca 5-7 mm inter se distantibus nervulorum areolis ca 0.5 mm latis. Panícula 5-12 cm longa multiflora ramis primariis in quoque nodo plerumque 4; flores 3-5-aggregati 6-meri, pedicellis ca 0.4-0.6 mm longis crassis, bracteis 2-2.8 X 1.6-2 mm subpersistentibus. Hypanthium (ad torum) ca 2.7 mm longum dense minuteque pinoideo-puberulum; calycis tubus 1 mm longus intus et extus modice pinoideo-puberulus, lobis 0.8 mm longis oblongis (apice rotundato) intus glabris, dentibus exterioribus minutis inframarginalibus. Petala 5-5.8 X 1.5-1.9 mm obovato-oblonga modice granulosa. Stamina dimorpha, filamentis 5.3-5.5 mm vel 3.3-3.8 mm longis glabris, thecis subulatis poro 0.1 mm diam. Stamina

maiora: thecae 4.7 X 0.6 mm, poro ventraliter inclinato; connectivum non prolongatum ventraliter hebetè bilobulatum et glandulis 1-2 ornatum. Stamina minora: thecae 3.2-3.5 X 0.45 mm, poro dorsaliter inclinato; connectivum obscure (0.1 mm) prolongatum ventraliter bilobulatum et plerumque eglandulosum. Stigma non expansum; stylus 8.5 X 0.5 mm ad basim sparsiuscule stellulato-puberulus in ovarii apicem ca 0.4 mm immersus; ovarium 4-loculare et ca 1/4 inferum apice granuloso.

Type Collection: J. Brandbyge, E. Asanza, L. Werling, & S. Leth-Nissen 33885 (holotype US 2992326; isotype AAU), collected in primary forest on elevated ground east of tourist house, Lagunas de Cuyabeno, Prov. Napo, Ecuador, elev. 300 m, 22 Aug. 1981. "Tree 7 m. Flowers white."

Paratypes (all Napo, Ecuador, elev. 300 m, AAU, US): Rio Cuyabeno 1.5 km upstream from Puerto Bolívar, Brandbyge, Asanza, Werling, & Leth-Nissen 33746 ("Tree 8 m. Twigs and lower side of leaves brownish pubescent."); Lagunas de Cuyabeno, second lake 3 km west of first lake, Brandbyge, Asanza, Werling, & Leth-Nissen 33964 ("Tree 6 m. Flowers white. Anthers yellow"); Lagunas de Cuyabeno, NE part of first lake, Brandbyge, Asanza, Werling, & Leth-Nissen 36025 ("Tree 7 m. Petals white. Anthers yellow").

Miconia pubipetala (confined to the eastern and central Amazon-Orinoco drainage) has predominantly 5-merous flowers on pedicels 2-3 mm long, ovate calyx lobes, and 3-locular ovaries. Miconia amazonica Cogn. is also suggestive of M. hylophila, differing in the 7-nerved leaf blades, essentially truncate calyx, externally stellulate-puberulous petals, sparsely stellulate-puberulous filaments, and densely stellulate-lepidote ovary apex.

MICONIA HETEROCHAETA Wurdack, sp. nov.

M. hookerianae Triana distanter affinis, foliis anguste ellipticis petiolis brevioribus ramulorum pubescentia longiore inflorescentiae hypanthiique pubescentia p. p. glandulifera antheris hypanthiisque longioribus ovario vix infero differt.

Ramuli teretes sicut petioli inflorescentiae axis (basim versus) dense setosi pilis gracilibus laxis 5-7 mm longis ad apicem saltem pro parte stellatis et pilis stipitato-stellatis (stipite 2-3 mm longo) densissime setosi. Petioli 1(-1.5) cm longi; lamina 32-40 (vel ultra) X 5-9 cm anguste elliptica apice gradatim 5-6 cm acuminato basi 0.3-0.5 cm cordulata, chartacea et integra dense ciliata pilis stellatis, supra nervis primariis exceptis glabra, subtus in superficie modice stellato-setulosa pilis plerumque sessilibus ca (0.3-)0.5(-0.7) mm latis in nervis primariis dense setosa pilis gracillimis stipitato-stellatis usque ad 5 mm longis et densissime pilis stellatis sessilibus vel breviter stipitatis armata, 3-nervata nervis secundariis 0.7-1 cm inter se distantibus nervulis subtus laxè reticulatis areolis (0.5-)1 mm latis. Panicula 18-30 cm longa multiflora; flores 5-meri, pedicellis (0-)2 mm longis et plerumque ca 0.5 mm infra hypanthium articulatis, bracteolis ca 2 X 0.5-0.7 mm caducis. Hypanthium (ad torum) 4.5-5 mm longum sicut inflores-

centiae rami dense pilis stellatis sessilibus vel ad 0.5 mm stipitatis et modice pilis laevibus glanduliferis 0.3-1 mm longis ornatum; calycis tubus 0.9-1 mm longus, lobis interioribus 0.7-0.8 mm longis late ovatis rotundatis, dentibus exterioribus obscuris inframarginalibus; torus intus sparse glandulosus (0.1-0.2 mm). Petala 4.6-5 X 2.2-2.4 mm obovato-oblonga (apice paulo emarginato) extus granulosa et sparse stellato-puberula. Stamina in dimensionibus dimorphica, filamentis sicut stylo sparse glandulosis (0.1 mm), thecis subulatis ad basim ventraliter 0.4-0.5 mm prolongatis poro 0.1 mm diam., connectivis ad basim sparse glandulis debilibus 0.1-0.15 mm longis ornatis. Stamina maiora: filamenta 5-5.2 mm longa; antherae 6.2-6.5 X 0.5-0.7 X 0.5 mm, poro ventraliter inclinato. Stamina minora: filamenta 4 mm longa; antherae 5-5.3 X 0.5-0.6 X 0.5 mm, poro dorsaliter inclinato. Stigma non expansum; stylus 10-11 X 0.35-0.4 mm in ovarii apicem 0.8-0.9 mm immersus; ovarium 3-loculare 1/6-1/8 inferum apice glanduloso (0.15-0.2 mm).

Type Collection: Holguer Lugo 5431 (holotype GB; isotype US), collected at Saraquillo ca 5 km north of Sarayacu, Prov. Pastaza, Ecuador, 16 Aug. 1979. "Tree ca 4 m. Flowers white."

Paratypes (both Pastaza, Ecuador): H. Lugo 5508 (GB, US), trail to Copataza ca 10 km south of Sarayacu; H. Lugo 5636 (GB, US), Palta Playa 15 km north of Sarayacu ("Tree ca 3 m. Flowers white").

Miconia hookeriana has relatively broader leaf blades with acute to obtuse bases, petioles mostly 3-5 cm long, cauline hairs ca 1 mm long, eglandular inflorescence and hypanthial hairs, hypanthia 3-4 mm long, anthers 2.5-4.2 mm or 2-3.2 mm long with dorsally inclined pores and a rounded dorsal tooth, and ovary 1/2 inferior. Neither M. sessilifolia Naud. nor M. amplexicaulis Naud. (both with essentially sessile leaves and petals externally puberulous) seem as closely related to M. heterochaeta, nor do any of the species of Sections II-V of Cogniaux' arrangement. In the Flora of Ecuador, M. heterochaeta would key to near M. tomentosa (Rich.) Don ex DC., M. explicita Wurdack, and M. hookeriana; the first two species are not at all related to M. heterochaeta in pubescence or flowers. A probable close relative of M. heterochaeta, but with eglandular inflorescences and hypanthia, has been collected near Shaim in Amazonas, Peru, elev. 500 m (Berlin 444, fruiting).

MICONIA SUBSESSILIFOLIA Wurdack, sp. nov.

Sect. Miconia. M. stipitatae Gleason, M. cionotrichae Uribe, et M. mocquersii Wurdack affinis, foliis ubique in superficie glabris differt.

Ramuli teretes primum sicut foliorum subtus venae primariae basim versus inflorescentiaque sparse pilis stipitato-stellatis (stipite 0.1-0.5 mm longo) setulosi demum glabrati. Folia in quoque pari plus minusve disparilia (3:1-2.5); petioli 0.2-0.4 cm longi; lamina maior (7-)10-16 X (3-)4-8 cm oblongo-ovata apice per 1-2.5 cm gradatim hebeti-acuminato basi 0.2-0.5 cm cordata, chartacea et obscure distanterque undulato-serrulata eciliata,

ubique in venis secundariis venulis superficiei glabra, 5-ner-
vata nervis secundariis 5-8 mm inter se distantibus nervulis sub-
tus planis laxe reticulatis (areolis 1-2 mm latis). Panicula 5-
11 cm longa submultiflora; flores 5-meri sessiles in ramulis
interrupto-glomerati, bracteolis 1-1.5 X 0.4-0.6 mm oblongo-
ellipticis caducis. Hypanthium (ad torum) 1.5-1.7 mm longum
sparse et plus minusve caduce stellulato-puberulum; calycis tubus
0.5-0.6 mm longus, lobis interioribus 0.3-0.4 mm longis ovatis,
dentibus exterioribus inframarginalibus vel lobos interiores
aequantibus; torus intus glaber. Petala 3-3.2 X 0.8-1.5 mm obo-
vato-oblonga granulosa extus interdum sparsissime stellulato-
puberula. Stamina paulo dimorphica; filamenta 4-4.3 mm vel 3-3.2
mm longa glabra; thecae oblongo-subulatae poro 0.1-0.15 mm diam.,
connectivo non vel paullulo (0-0.2 mm) prolongato, ventraliter
bilobulato hebeti. Stamina maiora: thecae 2.3-2.5 X 0.4 X 0.4
mm, poro ventraliter inclinato, connectivi appendice ventrali
0.4-0.5 mm longa glandulis stipitatis 4-8 ornata. Stamina
minora: thecae 1.8-1.9 X 0.4 X 0.4 mm, poro terminali vel paul-
lulo dorsaliter inclinato, connectivi appendice ventrali 0.4 mm
longa glandulis 2(-4) ornata. Stigma paullulo expansum 0.4 mm
diam.; stylus 6.5 X 0.3 mm glaber in ovarii apicem 0.2 mm immer-
sus; ovarium 3-loculare et 0.4-0.5 inferum apice sparsissime
glandulis 0.05 mm longis ornatum.

Type Collection: Juan Hernández & Saulo Hoyos 61 (holotype
HUA 13438; isotype US), collected at Río Samana, San Luis,
Medellín-Bogotá road, Antioquia, Colombia, elev. 480 m, 12 Oct.
1981. "Arbusto 1.5 m, escasa. Inflorescencia blanca, cáliz
amarillo claro, corola blanca, estambres blancos; fruto baya
roja."

Paratypes (all Antioquia, Colombia): Linda Albert de Escobar 3334 (HUA, US), 2.2 km east of Río Samana bridge on Medellín-
Bogotá road, Mun. San Luis, elev. 400 m ("Arbusto de frutos
rojos"); Carlos A. Loaiza, Linda Escobar, & Saulo Hoyos 90 (HUA,
US) ("Arbusto 3 m; flor blanca") and 102 (HUA, US) ("Arbusto;
fruto morado") and Hernández & Hoyos 687 (HUA) ("Arbusto de
3 m"), all from Río Claro, Mun. San Luis, elev. 350-400 m; Hoyos,
Escobar, & Girón 139 (HUA, US), Río Samaná-Río Claro, San Luis,
elev. 700 m ("Arbusto de 1.5 m. Flores blancas. Comun y crec-
iendo en bosque primario perturbado"); J. Denslow 2337 (US)
("Small tree 15 ft. Fl. white with faint aroma") and 2467 (US)
("Shrub 4 m. Berries bright red, ridged"), both from near Planta
Providencia 26 km south of Zaragoza in valley of Río Anorí
between Dos Bocas and Anorí, elev. 400-700 m.

The suggested relatives all share the features of at least
in part stipitate-stellate pubescence and glandular bases of the
stamen connectives, but have pubescent leaf surfaces. The first
two congeners have distinctly petiolate leaves; M. mocquersii,
with essentially sessile leaves, has much denser inflorescence
indument, larger bracts and flowers, external calyx teeth pro-
jecting 0.7-0.8 mm, and nearly truncate calyx limb. Other west
Colombian species of Miconia with sessile leaves (M. cruenta
Triana, M. anisophylla Triana) are not closely related to

M. subsessilifolia. Three of the collections (Hoyos 90, 102, and 139) of M. subsessilifolia have young leaves strongly purplish-tinted beneath; all the other material seems to have concolorous foliage.

HENRIETTELLA TACHIRENSIS Wurdack, sp. nov.

H. tuberculosae Donn. Smith et H. verrucosae Triana *affinis*, floribus bene pedicellatis antherarum connectivis magis prolongatis differt.

Ramuli teretes sicut foliorum petioli et laminarum venae primariae supra et subtus hypanthiaque modice strigulosi pilis ca 0.5(-1) mm longis. Petioli 1.5-2.3 cm longi; lamina (8-)13-16 X (3.5-)5-9 cm elliptica apice gradatim per ca 0.5-1.5 cm hebeti-acuminato basi acuta, chartacea et essentialiter integra vel minute serrulata appresso-ciliolata, supra sparsiuscule strigulosa (demum subverruculosa) pilis 0.4-0.8 mm longis ad basim expansis, subtus sparse strigulosa pilis gracilibus 0.3-0.5 mm longis, 5-plinervata pari interiore (1-)2-2.5 cm supra basim subalternatim divergenti nervis secundariis 2-4 mm inter se distantibus nervulis subtus planis areolis ca 1 mm latis. Flores 5-meri in ramulis infra folia oriundi ca 8-10 in quoque nodo, bracteolis basalibus ca 0.5 X 0.3 mm ovato-triangularibus, pedicellis 2.5-3.3(-5) mm longis. Hypanthium (ad torum) 2.6-2.7 mm longum; calyx 0.2-0.25 mm longus truncatus, dentibus exterioribus ca 0.3 mm eminentibus. Petala 2.2 X 2.1-2.2 mm ovata ca 0.5-0.7 mm unguiculata (apice rotundato-obtusum) intus glabra extus centraliter modice strigulosa pilis robustis ca 0.3 mm longis. Stamina isomorphica glabra; filamenta 3-3.1 mm longa; antherarum thecae 1 X 0.5 X 0.7 mm apice ca 0.2 mm emarginato, poro 0.5 mm diam.; connectivum 1.1 mm prolongatum dorsaliter ad basim dente obtuso 0.4 mm longo armatum. Stigma capitatum 1 mm diam.; stylus 5.7 X 0.35-0.4 mm glaber; ovarium 5-loculare et omnino inferum ad apicem sparse setulosum (0.2 mm).

Type Collection: Luis Marciano Berti & Ismael Peña 168-980 (holotype US 2968516; isotype MER), collected in humid submontane forest along the Palo Grande-Minas de Carbón de Lobatera road, Parque "Cazadero," Municipio Lobatera, Edo. Táchira, Venezuela, 11-10-1980. "Arbolito de 6 m de alto por 10 cm de diam. Flores blancas."

Paratypes (both Táchira, Venezuela): Steyermark & Liesner 118710 (US, VEN, in young bud), from forested slopes near Mata Mula north of Delicias on road to Bramon, elev. 1750 m, 26 July 1981 ("Shrub 2 m tall; leaves membranous, deep green above, paler green below with raised nerves; calyx pale green"); Liesner & Guariglia 11805 (MO, US, VEN, fruiting), from Quebrada Cazadero 16 km NW of San Cristobal, elev. 650-900 m, 4 May 1981 ("4 m tree, fruit green, becoming orange, and then red").

Both suggested relatives have pedicels to only ca 1 mm long and connectives basally prolonged 0.2-0.25 mm below the thecae; neither species has prominently strigulose petals although both have infra-apical mucros. In H. verrucosa, the oblong anther thecae are ca 2 X 0.6 mm with a small pore, the stigma promi-

nently expanded; in *H. tuberculosa*, the anther pore is broad, but the stigma is only 0.4 mm wide. *Henriettella trachyphylla* Triana was described as with 4-merous flowers; several Sierra Nevada de Santa Marta collections (including Kirkbride 2221) have the vegetative facies of the Triana type collection, but 5-merous flowers with petal pubescence as in *H. tachirensis*. This Magdalena population differs from the Venezuelan novelty in the patent cauline and lower leaf surface pubescence and short anther connective prolongation. Fosberg 19124 (US, fruiting), from hills east of Río Valegra, Norte de Santander, elev. 2000 m, may represent a Colombian population of *H. tachirensis*; the leaves, however, are somewhat smaller and relatively wider.

LEANDRA CREMERSII Wurdack, sp. nov.

Sect. *Secundiflorae*. *L. francavillanae* Cogn. in aspectu similis, foliis supra glabris, ovario triloculare glabro, fructurum pilis pro parte glanduliferis differt.

Frutex 0.75-2 m; ramuli teretes sicut petioli inflorescentiaeque dense strigosi pilis laevibus eglandulosis gracillimis ca 1-2 mm longis. Petioli (1.5-)2-3(-4) cm longi; lamina (5-)10-15 (-18) X (2.5-)4-5(-6) cm elliptico-lanceata apice gradatim acuminate basi late acuta, chartacea et integra dense appresso-ciliata (pilis gracillimis 2-4 mm longis), supra per costam strigosa (pilis gracillimis ca 2 mm longis) alioqui glabra, subtus dense vel modice sericeo-strigosa (pilis gracillimis ca 3-4 mm longis) et modice appresso-setulosi (pilis gracillimis ca 0.3 mm longis), 5-nervata nervis secundariis 2-3 mm inter se distantibus nervulis subtus planis obscuris areolis ca 0.4 mm latis. Panicula 14-25 cm longa oblonga, ramis oppositis 0.5-2 cm longis; flores 5-meri in ramulis secundi subsessiles (pedicellis ca 0.3 mm longis), bracteolis 1.5-2 X 0.3 mm acuminatis persistentibus. Hypanthium (ad torum) ca 1.5 mm longum densiuscule laxaque strigosum pilis gracillimis ca 2 mm longis eglandulosis (pilis glanduliferis brevibus ad anthesim occultis); calycis tubus 0.2 mm longus, lobis interioribus ca 0.8 X 0.7 mm oblongis apice hebeti-acuto, dentibus exterioribus setuliferis 0.1-0.2 mm eminentibus. Petala glabra lanceata acuminata 3-3.1 X 0.6-0.7 mm. Stamina isomorphica glabra; filamenta 2.7 mm longa; antherarum thecae 1.6 X 0.3 X 0.35 mm anguste oblongae, poro ca 0.1 mm ventraliter inclinato, connectivo non vel vix (0.05 mm) prolongato non appendiculato. Stigma non expansum; stylus 5 X 0.2-0.1 mm glaber in ovarii collo ca 0.2 mm immersus; ovarium 3-loculare et 5/6 inferum apice glabro; hypanthium fructiferum sparse pilis glanduliferis ca 0.5 mm longis setuliferum.

Type Collection: G. Cremers 8201 (holotype CAY), collected at "bord de piste entre Citron et le Mont Décou Décou" near Paul Isnard, French Guiana, 10-9-1983. "Arbuste. Fleurs à pétales triangulaires blancs. Etamines à anthère jaune."

Paratypes: French Guiana (all fruiting, Massif Décou Décou, Paul Isnard region, elev. 350-400 m): Cremers 7923 (CAY), 8172 (CAY, US), 8197 (CAY, US), de Granville 5289 (CAY), 5328 (CAY, US). Brazil: near Cachoeira Macacoara, Rio Jari, Terr. Amapa,

elev. 200 m, W. A. Egler & H. S. Irwin 46689 (NY, US).

Leandra francavillana has upper leaf surfaces minutely strigulose, ovaries 5-celled and puberulous at the apex, and fruiting hypanthia lacking glandular hairs. All of the 5-merous species of Leandra Sect. Secundiflorae with 3-celled ovaries treated in the Melastomataceae of Venezuela and Ecuador have strigulose to strigose upper leaf surfaces; of these, much of the material of L. sanguinea Gleason has similar sericeous pubescence on the leaves beneath (but the margins serrulate).

LEANDRA CLIDEMIOIDES (Naud.) Wurdack, comb. nov.

Platycentrum clidemioides Naud., Ann. Sci. Nat. ser. 3, Bot. 18: 114. 1852.

LEANDRA CLIDEMIOIDES (Naud.) Wurdack subsp. ECUADORENSIS (Wurdack) Wurdack, comb. nov.

Platycentrum clidemioides Naud. subsp. ecuadorensis Wurdack, Phytologia 18: 149. 1969.

LEANDRA CLIDEMIOIDES (Naud.) Wurdack subsp. BOLIVIENSIS (Wurdack) Wurdack, comb. nov.

Platycentrum clidemioides Naud. subsp. boliviensis Wurdack, Phytologia 18: 149. 1969.

LEANDRA COADUNATA Wurdack, sp. nov.

L. clidemioidi (Naud.) Wurdack affinis, inflorescentiae pilis pro parte glanduliferis petalis minoribus differt.

Ramuli teretes sicut foliorum supra et subtus venae primariae inflorescentiaque densiuscule laxo-strigulosi pilis laevibus 0.5-1 mm longis. Petioli (0.5-)1-2 cm longi; lamina (8-)12-19 X (3-)4-7 cm elliptica vel oblongo-elliptica apice gradatim per 1-2 cm acuminato basi acuta, chartacea et subintegra vel obscure crenulato-serrulata ciliolata, supra sparse strigulosa pilis laevibus gracilibus 0.3-0.5 mm longis, subtus sparsiuscule vel modice appresso-setulosa pilis laevibus gracillimis ca 0.5 (-1) mm longis, breviter (0.5-1 cm) 5-plinervata nervis secundariis 3-5 mm inter se distantibus. Panicula 10-16 cm longa multiflora (ramis primariis 2 vel 4 in quoque nodo) pilis glanduliferis 0.5-0.7 mm longis sparse induta; flores 5-meri, bracteo-
lis subulatis setuliferis ca 0.4 mm longis subsistentibus, pedicellis supra bracteolas 0.1-0.3 mm longis. Hypanthium (ad torum) 1.6-1.7 mm longum densiuscule appresso-setulosum pilis gracilibus 0.3-0.5 mm longis pilis glanduliferis ca 0.5 mm longis sparse intermixtis; torus intus modice glanduloso-setulosus (0.1 mm); calycis tubus 0.1 mm longus, lobis interioribus 0.2-0.3 mm longis ovatis ad basim remotis, dentibus exterioribus setulosis lobos interiores aequantibus vel paullulo (0.1 mm) superantibus setula ca 0.4 mm longa terminatis. Petala 0.5-0.6 X 0.2 mm obovato-oblonga esetulosa granulosa ad margines furfuraceo-erosula. Stamina paulo dimorphica glabra, filamentis 1-1.2 mm longis, antheris lanceatis, poro ventraliter inclinato 0.1 mm diam., connectivo non prolongato. Stamina maiora: thecae 1.5-1.8 X

0.25-0.3 mm, connectivo dorsaliter dente hebeti ascendenti 0.6 mm longo 0.2 mm elevato et 0.2 mm libero armato. Stamina minora: thecae 1.5-1.7 X 0.3-0.35 mm, connectivo dorsaliter ad basim obscure elevato non appendiculato. Stigma non vel obscure expansum; stylus 4-4.6 X 0.15-0.2 mm glaber in ovarii apicem ca 0.1-0.2 mm immersus; ovarium 3-loculare et obscure (0.1-0.2) inferum apicem versus sparse glanduloso-puberulum (0.05-0.1 mm).

Type Collection: G. T. France & A. E. France 20962 (holotype INPA 44938; isotypes NY, US), collected on terra firme at Km 32, Manaus-Caracarai Road, Amazonas, Brazil, 12 April 1974. "Shrub 3 m tall. Inflorescence purple."

Paratypes (all Amazonas, Brazil): J. G. Kuhlmann 983 (RB, US), Uypiranga, Rio Negro near Manaus, 22 Dec. 1923 ("Arbusto de um metro, fl. esverdeada; estames amarelos, infl. purpura"); M. F. Silva, R. Lisboa, I. Leite, D. Coêlho, & J. Ramos 2047 (INPA), 13 Jan. 1977 ("Arbusto 1,50 m altura no limite da mata com a capoeira, solo argiloso; inflorescência roxa"), M. Silva 36 (INPA, US), Jan. 1972 ("Arbusto de 1,50 m de altura; flores com pétalas roxas"), and M. Silva & D. Coêlho 61 (INPA, US), 22 Feb. 1972 ("Arbusto de 1,5 m de altura; inflorescência roxa, estames amarelos"), all from Reserva Florestal W. Egler, Km 62-64 of Manaus-Itacoatiara Road; Aline de Castro e Santos & Angelo Augusto dos Santos 526 (INPA, US), 20 July 1982 ("Arbusto do capoeira, atingindo 2 m de altura. Sobre solo arenoso") and W. Rodrigues, L. Coêlho, & D. Coêlho 8401 (INPA, US), 19 Feb. 1968, both from Estrada Torquato Tapajós, Km 70 between Manaus and Itacoatiara; Arthur, Osmarino, Dionisio, & Luna INPA 48.272 (INPA), Estrada Torquato Tapajós, Km 132, 18 Mar. 1975 ("Arbusto de 2 metros; frutos maduros arroxeados").

As earlier indicated (Flora de Venezuela 8: 715. 1973), only the dorsal ascending appendage on the anther connective could be used as a generic distinction between Platycentrum and Leandra; several species of Leandra Sect. Tschudya (L. micropetala Cogn., L. purpurea Gleason, L. subobruta Wurdack) have seeds like those of L. coadunata. In its combination of minute petals, glandular pubescence, and dorsally appendaged large anthers, L. coadunata effectively bridges the gap between Platycentrum and Leandra Sect. Tschudya. Leandra clidemioides lacks glandular pubescence and has petals (0.8-)1.4-2 mm long. Leandra glandulifera (Triana) Cogn. (see Flora de Venezuela 8: 712-713) resembles L. coadunata, but has more patent hairs on the branchlets and primary leaf veins beneath, somewhat more obviously denticulate leaf blades, longer external calyx teeth, larger stamens with no dorsal appendage, and broader petals. The typical subspecies of L. clidemioides is now known from Peru (Huánuco, Castillo Alto west of Tingo Maria, elev. 800 m, Florman 5856).

TOPOBEA ALBERTIAE Wurdack, sp. nov.

T. durandianae Cogn. et T. maurofernandezianae Cogn. affinis, foliorum laminis ad apicem rotundato-emarginatis petalis staminibusque maioribus ovariis (3-)4-locularibus apice glabro et truncata (collo non evoluto) differt.

Ramuli primum quadrangulares demum teretes sicut folia novella primum strigulosi pilis mox deciduis. Petioli (2-)3-4 cm longi; lamina (9-)11-17(-19) X (6-)8-10(-12) cm elliptica apice rotundato-emarginato (interdum 1-2 mm hebeti-cuspidato) basi late acuta vel obtusa, coriacea et integra, breviter (0.3-0.5 cm) 5-plinervata (pari tenui 1-2 mm inframarginali incluso) nervis secundariis principalibus 2(-3) mm inter se distantibus subtus paulo elevatis. Flores 6-meri in quoque nodo superiore (4-)6-10(-12); pedicelli ad anthesim 10-18(-28) mm longi; bractee firmae suboblatae extus sparse inconspicueque puberuli (pilis laxis 0.5-1 mm longis caducis) fimbriato-ciliolatae (0.2-0.3 mm) nervis non evidentis apice truncato-rotundato; bractee exteriores 9-10 X 9-12 mm ad basim 2.5-3 mm coalitae et verrucosae; bractee interiores 11 X 11-12 mm liberae. Hypanthium (ad torum) 4.7-5 mm longum essentialiter glabrum; calyx 7-8 mm longus truncatus ultra bractee interiores 2-3 mm eminens, dentibus exterioribus obsoletis; torus intus sparse glandulosus (0.1 mm). Petala 24.5-28 X 14-19 mm obovata apice truncato-rotundato densiuscule obscureque ciliolata (0.1 mm) alioqui glabra. Filamenta 14-17 mm longa; antherae lateraliter inter se cohaerentes 13-14 X 2-2.5 X 1 mm oblongo-subulatae poris 0.6 mm diam. coalitis dorsaliter inclinatis; dens basalis 2.3 mm longus acutus patens. Stigma 0.3-0.5 mm diam. vix expansum; stylus 17.5-20 X 0.6-0.3 mm glaber; ovarium (3-)4-loculare glabrum 1/7-1/14 inferum apice 1.5-2 mm protracto truncato.

Type Collection: Linda Albert de Escobar, Dario Sánchez, & Wilson Rengifo 2278 (holotype HUA 016159; isotype US), collected at the Fincas Montepinar and Las Palmas, Vereda Quebrada Larga, Municipio Guatapé at the line with Mun. San Rafael, Antioquia, Colombia, elev. 1800 m, 4 Sep. 1982. "Arbol de 8 m de flores blancas muy perfumadas, anteras amarillas."

Paratype (topotypical): Escobar, Sánchez, & Rengifo 2257 (HUA, US). "Arbol 8 m de flores blancas y anteras amarillas, huele profundo por la noche."

Both Central American relatives have leaf blades apically rather gradually or abruptly acuminate, petals up to 17-18.5 mm long (and less notably clawed), anthers up to 9.7 mm long, basal connectives blunt and usually snorter, and 6-celled ovaries with a glandular-puberulous collar 1-1.3 mm long around the style base. I am as uncertain as Louis Williams (Fieldiana Bot. 29: 583. 1963) as to the distinctness of these two northern taxa; Pittier (Tonduz) 1844 (US) and Tonduz 4969 (US), determined by Cogniaux as the two Costa Rican species, both have similar foliage and ovarian collars (petals and stamens lacking). Two Panamanian collections (Correa & Dressler 700, Cerro Azul, Panamá; Gentry, Leon, & Forero 16841, Serranía del Darién, Darién) possibly are referable to T. albertiae, but the material is too incomplete for positive identification.